

The plaintiff below was entitled to recover the principal of the note sued upon, less the amount of the interest unlawfully reserved. Whether he was entitled to recover interest upon the amount of the principal so reduced, after the maturity of the note, is a point which has not been argued, and upon which we express no opinion.

The judgment of the Court of Appeals is reversed, and the case will be remanded with directions to proceed in conformity with this opinion.

BROWN ET AL. v. PIPER.

1. The application by the patentee of an old process to a new subject, without any exercise of the inventive faculty, and without the development of any idea which can be deemed new or original in the sense of the patent laws, is not the subject of a patent.
2. Evidence of what is old and in general use at the time of an alleged invention is admissible in actions at law under the general issue, and in equity cases, without any averment in the answer touching the same.
3. The court can take judicial notice of a thing in the common knowledge and use of the people throughout the country.

APPEAL from the Circuit Court of the United States for the District of Massachusetts.

Piper filed a bill to enjoin Brown and Seavey from infringing two patents, one of which, not being insisted on at the hearing, need not be considered. The other—No. 732, dated March 19, 1861—makes claim as follows:—

“Preserving fish and other articles in a close chamber by means of a freezing mixture, having no contact with the atmosphere of the preserving chamber.”

The defendants by their answer, among other objections not necessary to be mentioned, denied the novelty of the alleged invention.

The court below rendered a decree sustaining the validity of the patent, and perpetually enjoined the defendants from using or employing the invention therein described. They bring this appeal.

Mr. George Gifford and *Mr. Edward Avery* for appellants.
Mr. Causten Browne for appellee.

MR. JUSTICE SWAYNE delivered the opinion of the court.

The bill is founded upon two patents granted by the United States to the appellee,—one numbered 732, of the 19th of March, 1861; the other numbered 36,107, and dated Aug. 5, 1862. The second and later patent was not relied upon in the argument here, and may, therefore, be laid out of view. Our attention will be confined to the prior one. It is declared in the specification to be “for a new and improved method of preserving fish and meats.” The invention is alleged to consist “in a method of preserving fish and other articles in a chamber, and cooling the latter by means of a freezing mixture, so applied that no communication shall exist between the interior of the preserving chamber and that of the vessels in which the freezing mixture is placed.” The specification continues: “I do not profess to have invented the means of artificial congelation, nor to have discovered the fact that no decay takes place in animal substances so long as they are kept a few degrees below the freezing-point of water; but the practical application of them to the art of preserving fish and meats, as above described, is a new and very valuable improvement. The apparatus for freezing fish and keeping them in a frozen state may be constructed in various ways and of different shapes. The apparatus shown in the drawing, however, will suffice to illustrate the principle and mode of operation.”

The process and apparatus are then described as follows: A box of wood or other suitable material, surrounded by a packing of charcoal or other non-conducting substance, is to be provided, and the fish in small quantities laid in it on a rack. Metallic pans filled with a freezing mixture, such as salt and ice, are then to be set over them, and a cover shut over the pans. “In about twenty-four hours, the freezing mixture having been changed once in twelve hours, the fish will be frozen completely through.”

After being frozen, the fish or meat may, if desired, be covered with a thin coating of ice; and this coating may be preserved by applying the substances named, which will exclude the air,

and prevent the juices from escaping by evaporation. "The fish are then to be packed closely in a large preserving box, which is enclosed in a still larger box; the space between the boxes being filled with charcoal or other non-conducting material, to exclude the heat." Other minor details are described, which it is not deemed material to repeat. The patentee then declares: "I do not desire to be understood as confining myself to the specific apparatus above described, nor to the use of either or both the preliminary processes of freezing and cooling; but I have described the mode of operation, which, by experience, I have found best for preserving the most delicate varieties of fish." The summation and claim are: "Having described my invention, what I claim as new, and desire to secure by letters-patent, is, *preserving fish or other articles in a close chamber by means of a freezing mixture, having no contact with the atmosphere of the preserving chamber, substantially as set forth.*"

The patent is not for the principle long and well known to physicists, that a low degree of cold, like a high degree of heat, prevents the decay of animal matter; nor is it for the freezing of the articles to be preserved before or after they are placed in the preserving chamber; nor is it for applying, by means of an apparatus with any particular details of construction, cold to the articles to be preserved; nor is it for the frigorific effect of the freezing mixture upon the atmosphere of the inner chamber; but it is for the application to such articles of the degree of cold necessary to preserve them, by means of "a close chamber," in which they are to be placed, and "a freezing mixture, having no communication with the atmosphere of the preserving chamber."

If this result be reached by the means designated in any way substantially the same with that described, having the feature of the non-contact of the freezing mixture with the air of the preserving chamber, there is a clear invasion of the territory which the patentee has marked out and seeks to appropriate to himself.

It was earnestly maintained by the learned counsel for the appellee that the essence of the invention is the creation of "a freezing atmosphere" in the preserving chamber.

To this there are several answers. There is nothing in the

specification or claim to warrant the proposition. The direction is, that "the fish are to be packed closely." This implies clearly that as many fish are to be put into the preserving chamber as it can be made to contain.

Atmospheric air is itself an agent of decay; and in all such cases it is important to preclude as far as possible its presence and contact. "If air be absolutely excluded, putrefaction ceases; and the result is the preservation of the substance in some circumstances, perhaps in all." 3 Ure's Dict. of Arts, 548. "On this principle is founded Appert's process, by which easily decomposable articles of food and drink, such as meat, fish, vegetables, milk, &c., are preserved for years; viz., by packing them in air-tight bottles or soldered tin cans, heating the vessels for several hours in boiling water, and keeping them carefully closed." 2 Watts's Dict. of Chem. 625. The patentee is to be presumed to have known this property of air.

The patent is for "a new and useful improvement" in the art to which it relates. It was issued under the act of July 4, 1836. The rights of the parties are to be considered in the light of that act. The defence relied upon in the answer is the want of novelty; and several instances of prior use and knowledge, with the requisite circumstances of time, place, and persons, are alleged.

We deem it sufficient to consider one of them. On the 17th of August, 1842, a patent was issued to John Good "for a corpse preserver." The apparatus, as described, was an outer case with a close-fitting lid. The case was made double; there being a partition to within four or five inches, more or less, of the top of the outer one, leaving a space between the two of several inches, which was to be filled with ice. There was a false bottom with holes in it in the inner compartment. It rested upon ledges, which kept it four or five inches above the bottom. The intervening space was a receptacle for ice. The corpse was deposited upon the false bottom. A tray was placed over it, and under the lid. The tray was four or five inches deep, used to contain the freezing mixture, and had a flange to prevent the mixture from escaping. Proper outlets were provided for the passage of the water from the melting ice. There was no communication between the tray containing the freezing

mixture and the inner compartment containing the body. Swartz, an intelligent and unimpeached witness, was examined on the 15th of October, 1869. He testified that he was an undertaker, and had used the apparatus for about twenty years, sometimes with ice under the false bottom, and sometimes without it. In either case, he applied a sufficient degree of cold to prevent putrefaction before interment. He thought the bodies were sometimes frozen, but was not certain. The material point in his business was the prevention of decay for the time being; and that was always accomplished.

Here was the application of the requisite degree of cold exactly in the manner called for in the specification of the appellee.

This is hardly denied; but it is insisted that the process was never applied by the witness to the preservation of fish and meats.

The answer is, that this was simply the application by the patentee of an old process to a new subject, without any exercise of the inventive faculty, and without the development of any idea which can be deemed new or original in the sense of the patent law. The thing was within the circle of what was well known before, and belonged to the public. No one could lawfully appropriate it to himself, and exclude others from using it in any usual way for any purpose to which it may be desired to apply it.

This is fatal to the patent. *Ames v. Howard*, 1 Sumner, 487; *Howe v. Abbot*, 2 Story, 194; *Bean v. Smalwood*, id. 411; *Winans v. B. & P. R. R.*, id. 412; *Hotchkiss et al. v. Greenwood et al.*, 11 How. 248.

There is another view of the case that may properly be taken.

Evidence of the state of the art is admissible in actions at law under the general issue without a special notice, and in equity cases without any averment in the answer touching the subject. It consists of proof of what was old and in general use at the time of the alleged invention. It is received for three purposes, and none other,—to show what was then old, to distinguish what was new, and to aid the court in the construction of the patent.

Of private and special facts, in trials in equity and at law, the court or jury, as the case may be, is bound carefully to exclude the influence of all previous knowledge. But there are many things of which judicial cognizance may be taken. "To require proof of every fact, as that Calais is beyond the jurisdiction of the court, would be utterly and absolutely absurd." Gresley's *Ev.* in Eq. 294. Facts of universal notoriety need not be proved. See Taylor's *Ev.*, § 4, note 2. Among the things of which judicial notice is taken are the law of nations; the general customs and usages of merchants; the notary's seal; things which must happen according to the laws of nature; the coincidences of the days of the week with those of the month; the meaning of words in the vernacular language; the customary abbreviations of Christian names; the accession of the Chief Magistrate to office, and his leaving it. In this country, such notice is taken of the appointment of members of the cabinet, the election and resignations of senators, and of the appointment of marshals and sheriffs, but not of their deputies. The courts of the United States take judicial notice of the ports and waters of the United States where the tide ebbs and flows, of the boundaries of the several States and judicial districts, and of the laws and jurisprudence of the several States in which they exercise jurisdiction. Courts will take notice of whatever is generally known within the limits of their jurisdiction; and, if the judge's memory is at fault, he may refresh it by resorting to any means for that purpose which he may deem safe and proper. This extends to such matters of science as are involved in the cases brought before him. See 1 Greenleaf's *Ev.* 11; Gresley's *Ev.*, *supra*; and Taylor's *Ev.*, § 4, and *post*.

In the *Ohio L. & T. Co. v. Debolt*, 16 How. 435, it was said to be "a matter of public history, which this court cannot refuse to notice, that almost every bill for the incorporation of companies" of the classes named is prepared and passed under the circumstances stated. In *Hoare v. Silverlock*, 12 Ad. & Ell. n. s. 624, it was held that where a libel charged that the friends of the plaintiff had "realized the fable of the frozen snake," the court would take notice that the knowledge of that fable existed generally in society. This power is to be exer-

cised by courts with caution. Care must be taken that the requisite notoriety exists. Every reasonable doubt upon the subject should be resolved promptly in the negative.

The pleadings and proofs in the case under consideration are silent as to the ice-cream freezer. But it is a thing in the common knowledge and use of the people throughout the country. Notice and proof were, therefore, unnecessary. The statute requiring notice was not intended to apply in such cases. The court can take judicial notice of it, and give it the same effect as if it had been set up as a defence in the answer and the proof were plenary. See *M. & A. Glue Co. v. Upton*, 6 Patent Office Gazette, 843, and *Needham v. Washburn*, 7 id. 651,— both decided by Mr. Justice Clifford upon the circuit. We can see no substantial diversity between that apparatus and the alleged invention of the appellee. In the former, as in the apparatus of the appellee, "the freezing mixture" has "no contact with the atmosphere" of the chamber where the work is to be done. If the freezer be full, and the preserving chamber be full, there would be room for but little air in either. If either were only partially full, the vacuum would be filled with that substance. The cold is generated by the same materials, and applied under the same circumstances. If the cream were taken out of the freezer, and fish put in, there would be, in all substantial respects, the same apparatus, process, and result. If the preserving chamber were as tight as the freezer, either might be convertibly used for the purpose of the other.

"The preservative effect of cold, and especially of dry cold, is well known and exemplified in the keeping of meat and fruit in ice-houses. Animals have been found undecomposed in the ice of Siberia which belong to extinct species, and which must have been embalmed in ice for ages." Tit. "Antiseptic," 1 Amer. Encyclo. 570.

Artificial freezing is usually applied to water, and articles of food.

"There are two general methods of effecting it; viz., by liquefaction and by vaporization and expansion. The method by liquefaction is performed by freezing mixtures, which are formed by mixing together two or more bodies, one or all of which may be solid. They are used together in vessels having three or more

concentric apartments, — an inner one, containing the article to be frozen ; one eccentric to this, containing the freezing mixture, provided with some contrivance for agitation ; one, again, outside of this, filled with a non-conductor of heat, as powdered charcoal, gypsum, or cotton wool ; and sometimes one between them for holding water." Tit. "Freezing," 7 Amer. Encyclo. 474.

Here the principle and substance of the appellee's claim are set forth as belonging to the general domain of knowledge and science. It is known that Lord Bacon applied snow to poultry to preserve it. He said the process succeeded "excellently well." The experiment was made in his old age, imprudently, and brought on his last illness.

Examined by the light of these considerations, we think this patent was void on its face, and that the court might have stopped short at that instrument, and without looking beyond it into the answers and testimony, *sua sponte*, if the objection were not taken by counsel, well have adjudged in favor of the defendant.

These views render it unnecessary to consider the exceptions to the master's report.

The decree of the Circuit Court is reversed ; and the cause will be remanded, with directions to dismiss the bill.

PIPER v. MOON ET AL.

MR. JUSTICE SWAYNE delivered the opinion of the court.

The appellant's bill in this case is founded upon the same patent as the bill of the appellee in *Brown et al. v. Piper*, above reported.

In this case the court below dismissed the bill, and the complainant appealed to this court. What was said in the case referred to disposes of this.

The decree of the Circuit Court is affirmed.